

ENGINEERING MANAGEMENT SUPPORT INC.

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March 21, 2016

VIA: Electronic Mail

U.S. Environmental Protection Agency
Region VII SUPR/MOKS
11201 Renner Boulevard
Lenexa, KS 66219

ATTENTION: Mr. Tom Mahler

**SUBJECT: Comments on EPA Sediment Sampling Quality Assurance Project Plan
West Lake Landfill Operable Unit 1, Bridgeton, Missouri**

Dear Mr. Mahler,

On behalf of Cotter Corporation (N.S.L.), Bridgeton Landfill, LLC, and Rock Road Industries, Inc. (OU-1 Respondents), Engineering Management Support Inc. (EMSI) submits this letter to provide comments on the site-specific Addendum to the Quality Assurance Project Plan (QAPP) prepared on behalf of EPA Region 7 by Tetra Tech, Inc. for collection of soil/sediment samples of drainage features at the West Lake Landfill, dated February 2, 2016. The following comments reference particular sections of the Addendum to the Generic QAPP or pages and paragraphs of Appendix A to the QAPP.

1. P. 2, First full paragraph - The purpose of this effort is stated to “...*assess presence of radiological-impacted material (RIM) derived from the West Lake Landfill site within selected drainages near the boundaries of Areas 1 and 2 of Operable Unit 1 (OU1).*” The document goes on to state that “*Of particular concern is erosion that may have occurred during heavy rainfall in the St. Louis area between December 26 and 29, 2015 when the area received 10 inches of rain or more.*” As noted below, and as I have discussed with you on prior occasions, as part of the Additional Characterization of Areas 1 and 2, the OU-1 Respondents previously collected samples from several of the proposed sampling points, during which EPA also collected split samples, the results of which can be used to address this issue.
2. The Region 7 Addendum to the Generic QAPP (Sections 2.6, 2.7 and 4.1) indicates that sample collection and data assessment and validation will be performed in accordance with standard operating procedures (SOPs); however, these SOPs were not included in the documents provided to the OU-1 Respondents.

3. Section 4.2 of the Addendum to the Generic QAPP proposes to use generic Superfund data validation procedures for validation of the resulting data. Consideration should be given to performing validation in accordance with MARLAP, which would seem to be more appropriate for radionuclide analyses.
4. Appendix A
 - a. There is a typographical error on page 1. The acronym for the West Lake Landfill Site is incorrectly identified as "WLSS," rather than "WLLS" as used in the remainder of the document.
 - b. The document fails to consider the results of the prior sediment sampling, although it does reference the locations of the prior sediment samples.
 - c. Page 3, Sampling Locations, second paragraph - Consideration should be given to using disposal trowels or scoops rather than using a metal trowel that has to be decontaminated between sample sites. Please also identify what methods will be used to manage the decontamination water.
 - d. Proposed Sediment Sample locations (Figure 1/Table A-1)
 - i. Sediment 1A and 1B – At EPA's direction and under EPA observation, the OU-1 Respondents collected sediment samples from these two locations on 1-8-16 (after the major rainstorm that occurred in December 2015) as part of the Additional Characterization work. EPA also collected split samples as part of this effort. Accordingly, as discussed, EPA has indicated that further sampling from these locations is not necessary.
 - ii. Sediment 2 – During our inspection of this area with you on March 16, 2016, we determined that there is no sediment accumulation in this area. You requested that we instead collect a sediment sample from this drainage channel from the upstream side of the culvert, immediately west of the parking area for the landfill office.
 - iii. Sediment 3 – The document indicates that this location is near RI Weir 9 or possibly Weir 8; however, EPA's proposed location No. 3 is not located near the locations of either Weir 8 or Weir 9. In addition, these weirs were only temporary structures, and no longer exist. Furthermore, the topography in this area has been significantly altered from placement of inert fill in Area 2 and stockpiling of soil on the Inactive Sanitary Landfill. The proposed location for Sediment 3 appears to be located on the Inactive Sanitary Landfill and not in a drainage path from Area 2.
 - iv. Sediment 4 – This is located in the southeast corner of Lot 2A2 of the AAA Trailer property. At EPA's direction and under EPA supervision, a soil sample (there is no sediment at this location) was obtained from this location on March 8, 2016, as part of the work on AAA Trailer property. Furthermore, thorium-230 above the unrestricted use criteria identified in this area during the RI was shown to be the result of historic (1970s) erosion of soil from the Area 2

berm. Therefore, the presence of radionuclides at this location provides no meaningful information as to whether the recent (December 2015) storm caused any soil to be transported from Area 2 to this location. Regardless, a soil sample was collected from this location on March 9, 2016 as required by EPA and under EPA supervision. Consequently, you indicated that an additional sample did not need to be collected from this location.

- v. Sediment 5 – During our inspection of this location on March 16, 2016, we determined that there is no evidence of either erosion or sediment accumulation in the vicinity of this proposed sample location and therefore you indicated that there was nothing to sample at this location.
- vi. Sediment 6 – During performance of the work at AAA Trailer on March 8, 2016, you and I inspected this location, and we determined that the culvert identified in the EPA QAPP for Sediment 6 discharges directly to the Earth City pond. Therefore, any sediment that may have been contained in discharge from this culvert would be located at the bottom of the pond, which is currently covered by ten or so feet of water. Accordingly, we determined that there is nothing to sample at this location. You requested that a sample be collected instead from the adjacent AAA Trailer property at the upstream inlet to the culvert. Respondents collected that on March 16, 2016, and a split sample was provided to EPA at that time.
- vii. Sediment 7 – Upon review of the location of sediment sample 4 (discussed above), which was collected at EPA's request and from which EPA collected a split sample as part of the Additional Characterization of Areas 1 and 2, you concluded that sediment sample 4 addressed EPA's need to sample from this (Sediment 7) location, and no further samples were required from this location.

To assist EPA with its evaluations, we have included with these comments the analytical results obtained for the three sediment samples we collected in January 2016 as part of the Additional Characterization of Area 1 and 2. We have not yet seen the results for the split samples obtained by EPA from these same three locations.

- e. Decision Rule – The document identifies the Decision Rule for this work as follows: *“Individual soil/sediment samples with combined radium, combined thorium, or total uranium exceeding the respective reference levels will be considered potentially characteristic of RIM. If a sample collected from a drainage feature is potentially characteristic of RIM, additional sampling will be proposed to determine the nature and extent of the apparent release of RIM cause by erosional runoff.”* This is incorrect with respect to Sediment Sampling location No. 4, as noted above, since occurrences of radionuclides

at this location have already been identified as a result of historic erosion of soil from the Area 2 berm and deposition on the surface of this area.

Therefore, the presence of radionuclides in a sample from this location provides no meaningful information with which to assess potential runoff from the December 2015 storm or any other event.

If you have any questions or desire additional information related to these comments, please do not hesitate to contact me.

Sincerely,
ENGINEERING MANAGEMENT SUPPORT, Inc.

A handwritten signature in black ink, appearing to read 'Paul V. Rosasco', with a stylized, sweeping flourish extending to the right.

Paul V. Rosasco, P.E.

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